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| 09/887,655 | 06/22/2001 | Avraham T. Freedman | 12293-79 | 7163 |
| 26579 | 7590 | 09/22/2004 | EXAMINER | |
| AKAMAI TECHNOLOGIES, INC. ATTN: DAVID H. JUDSON 8 CAMBRIDGE CENTER CAMBRIDGE, MA 02142 | | | JOO, JOSHUA | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2154 | |

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/887,655

Applicant(s)

FREEDMAN, AVRAHAM T.

Examiner

Joshua Joo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. Claims 1-13 are rejected.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 5, 7, and 13 are rejected under 35 U.S.C. 102(e) as being unpatentable by Ginzboorg, US Patent #6,141,410.

4. As per claims 1 and 13, Ginzboorg teaches of an invention for analyzing data and determining the most suitable link for routing the data. Ginzboorg's invention comprises of:

a) Code executed in accordance with a set of one or more configurable parameters to initiate periodic path quality measurements for each set of a set of a transit network/destination links, wherein an overriding test route identifying each transmit network/destination network link is configured into the router at the time of the path quality measurement and then withdrawn after the measurement. (Column 9, lines 2-5. A terminal unit is used for communication with the router, where MML language can be used. The terminal can be used to set desired attributes for routing. Column 5, lines 16-26. The destinations to be checked for routing are determined. Column 14, lines 5-6. All the alternatives may be checked and the most successful matching is selected. Column 5, lines 6-24. Before information can be

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send, the links are temporary tested. Column 5, lines 62-67. After the test, a link is selected and the selection process is finished.)

b) Code executed following the path quality measurements for evaluating whether a first transit network/destination network link is a candidate for rerouting to a second transit network/destination network link. (Column 5, lines 50-55. The alternative destination is tested to determine if it is suitable to meet the desired attributes.)

c) Code responsive to satisfaction of a given path evaluation criteria and being executed to establish a communication with the router to facilitate a reroute from the first to the second transit network/destination network link. (Column 5, lines 55-58. A true or a false is returned, based on matching. Column 8, lines 28-34. If the alternative meets the desired attributes, the alternative is returned as a selection result.)

5. As per claim 2, Ginzboorg teaches the invention of claim 1, where the apparatus includes an interface for enabling setting of the one or more configurable parameters. (Column 9, lines 1-14. A user interface can be used for setting desired attributes.)

6. As per claim 5, Ginzboorg teaches the invention of claim 2, wherein the configurable parameters include a list, identifying destination networks links to evaluated. (Column 8, lines 57-65. The database has all the information needed for routing, which includes the destinations and the sub destinations. Column 9, lines 5-9. The interface can be used to determine the destinations for routing.)

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7. As per claim 7, Ginzboorg teaches the invention of claim 1, where the apparatus has code responsive to satisfaction of the given path evaluation criteria and being executed to output a recommendation illustrating a reroute from the first to the second transit network/destination network link. (Column 5, lines 56-63. The result of the matching is a Boolean function of True or False. Column 8, lines 28-38. If the subdestination matches the attributes and are successful, the label of the subdestination is returned as a selection result.)

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginzboorg, US Patent #6,141,410 as applied to claims 1 and 2 above, and further in view of Thomas et al, US Patent #6,665,271, Thomas hereinafter.

10. As per claim 3, Ginzboorg teaches an invention for routing traffic by testing each destination and selecting the most suitable link to route traffic. However, Ginzboorg does not mention of a probe type in the configurable parameters.

11. Thomas teaches of an invention where a probe is used to measure the network path between two devices (Column 6, line 65 - Column 7, line 10). It would have been obvious to

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one of ordinary skill in the art at the time the invention was made for Ginzboorg's invention to include the probe from Thomas' invention because since Ginzboorg's invention is testing for the most suitable link, using a probe will assist in the testing by monitoring the link or collecting data for link activity. It will provide a better measurement of the link.

12. As per claim 4, Ginzboorg teaches an invention for routing traffic by testing each destination and selecting the most suitable link to route traffic. However, Ginzboorg does not mention of an ICMP probe type in the configurable parameters.

13. Thomas teaches of an invention where an ICMP probe is used to measure the network path between two devices and locate the intermediate routers in a path between endpoints (Column 6, line 65 - Column 7, line 10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include Thomas's ICMP probe into Ginzboorg's parameters because since Ginzboorg's invention is testing for the most suitable link, using a ICMP probe will assist in the testing by measuring the response time and locating the core points from the router to the destination. Thus, using a probe will provide a better measurement of the link.

14. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginzboorg, US Patent #6,141,410 as applied to claims 1 and 2 above, and further in view of Tzeng et al, US Patent #6,061,712, Tzeng hereinafter.

15. Ginzboorg teaches an invention for routing traffic by testing each destination and selecting the most suitable link to route traffic. His invention has an interface with varying

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parameters to form a routing test. However, Ginzboorg's invention does not mention a given IP address within a destination network for the parameters.

16. Tzeng discusses a method for IP routing table lookup, where the router is given a set of IP addresses, where it contains information to reach the destination (Column 1, lines 29-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made for Ginzboorg's parameter to include a given IP address as described in Tzeng's invention because since Ginzboorg's invention is for determining the most suitable links to route traffic, having a given IP address to the destination will provide the most appropriate route to reach the destination.

17. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginzboorg, US Patent #6,141,410 as applied to claims 1 above, and further in view of Agarwal et al, US Patent #6,760,777, Agarwal hereinafter.

18. Ginzboorg teaches an invention for routing traffic by testing each destination link and then selecting the most suitable link to route traffic. However, Ginzboorg differs from the claimed invention that Ginzboorg does not disclose that the routing information is configured into the router by an iBGP peering session.

19. Agarwal discloses an invention of establishing routing sessions between routers, where iBGP is used (Column 5, lines 21-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ginzboorg and Agarwal

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because using iBGP will allow other routers within the domain to communicate with Ginzboorg's router and formulate routes.

20. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginzboorg, US Patent #6,141,410 as applied to claims 1 above, and further in view of Munger et al, US Patent #6,502,135, Munger hereinafter.

21. Ginzboorg teaches an invention for routing traffic by testing each destination link and then selecting the most suitable link to route traffic. However, Ginzboorg differs from the claimed invention that Ginzboorg does not disclose establishing a secure connection between the apparatus and the router to transfer information.

22. Munger discloses an invention for providing secure session between a computer and a router (Column 16, lines 15-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ginzboorg and Munger to establish a secure connection between the computer and router to prevent unauthorized access to the computer and to prevent damage to computers connected to the network.

23. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginzboorg, US Patent #6,141,410 and in view of Tzeng, US Patent #6,061,712, and Shah et al, US Patent #6,292, 832, Shah hereinafter.

24. As per claim 10, Ginzboorg teaches of an invention for analyzing data and determining the most suitable link for routing the data. Ginzboorg's invention comprises of:

- a) Periodically conducting local traffic analysis of outgoing packets. (Column 2, lines 30-42. The route selector does an analysis of the data.)
- b) Based on data collected during the local traffic analysis, selecting a best alternative for a given destination given the then-existing connectivity conditions. (Column 8, lines 28-34. If the alternative meets the desired attributes, the alternative is returned as a selection result.)
- c) Automatically logging into the router and entering a new configuration to cause the router to reevaluate all routes heard from the selected alternative according to the new configuration. (Column 9, lines 9-14. Using the interface, a user can change the desired selection policies for routing along with the difference attributes for the destinations.)

25. Ginzboorg teaches of an invention for analyzing data and determining the most suitable link for routing the data. However, Ginzboorg's invention differs from the claimed invention that Ginzboorg does not mention a set of IP addresses in the network.

26. Tzeng discusses a method for IP routing table lookup, where the router is given a set of IP addresses, where it contains information to reach the destination (Column 1, lines 29-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made for Ginzboorg's invention to have a set of ip addreses to which the data is send as described in Tzeng's invention because since Ginzboorg's invention is for determining the most suitable links to route traffic, having a given IP address to the destination will provide the most appropriate route to reach the destination.

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27. Ginzboorg teaches of an invention for analyzing data and determining the most suitable link for routing the data. However, Ginzboorg's invention differs from the claimed invention that Ginzboorg does not mention an autonomous system for routing information.

28. Shah teaches an invention for selecting a service in an autonomous network (Column 7, line 66 – Column 8, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ginzboorg and Shah to have Ginzboorg's network use an autonomous system network because using that system provides a single routing policy, which will allow better communication among the routers, and the routers would be able to exchange routing information.

29. As per claim 12, Ginzboorg teaches the invention of claim 10, wherein the best system for a given destination is selected according to a given path evaluation algorithm. (Column 8, lines 28-38. A subdestination is selected after matching the attributes.)

30. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginzboorg, US Patent #6,141,410, Tzeng, US Patent #6,061,712, and Shah, US Patent #6,292, 832 as applied to claim 10, and further in view of Thomas et al, US Patent #6,665,271, Thomas hereinafter.

31. Ginzboorg teaches an invention for routing traffic by analyzing data, testing each destination link, and then selecting the most suitable link to route traffic. However, Ginzboorg does not mention using the outgoing data as ICMP packets.

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32. Thomas teaches of an invention where an ICMP probe is used to measure the network path between two devices (Column 6, line 65 - Column 7, line 10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an ICMP packets because since Ginzboorg's invention is testing for the most suitable link, using a ICMP packets will assist in the testing by measuring the response time and locating the core points from the router to the destination. Thus, using an ICMP packet will provide a better measurement of the link.

Conclusion

26. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 703 605-4345. The examiner can normally be reached on Monday to Friday 7 to 4.

28. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on 703 305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


29. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JJ

September 10, 2003


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